

# John Marius Rodenburg

## List of Publications by Year in descending order

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91  
papers

7,783  
citations

109321

35  
h-index

66911

78  
g-index

92  
all docs

92  
docs citations

92  
times ranked

2735  
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient large field of view electron phase imaging using near-field electron ptychography with a diffuser. Ultramicroscopy, 2021, 231, 113257.	1.9	13
2	An X-ray ptycho-tomography model of 'Seeing order in "amorphous" materials'. Ultramicroscopy, 2019, 203, 88-94.	1.9	1
3	Ptychography. Springer Handbooks, 2019, , 819-904.	0.6	56
4	Diffraction-limited superresolution ptychography in the Rayleigh-Sommerfeld regime. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, A12.	1.5	8
5	Image feature delocalization in defocused probe electron ptychography. Ultramicroscopy, 2018, 187, 71-83.	1.9	4
6	A record-breaking microscope. Nature, 2018, 559, 334-335.	27.8	4
7	Breaking ambiguities in mixed state ptychography. Optics Express, 2016, 24, 9038.	3.4	43
8	Multiple mode x-ray ptychography using a lens and a fixed diffuser optic. Journal of Optics (United Kingdom), 2016, 17, 022201.	2.2	17
9	Pixel size adjustment in coherent diffractive imaging within the Rayleigh-Sommerfeld regime. Applied Optics, 2015, 54, 1936.	1.8	16
10	Separation of three-dimensional scattering effects in tilt-series Fourier ptychography. Ultramicroscopy, 2015, 158, 1-7.	1.9	37
11	Possibility of high-resolution ptychographic iterative imaging with low energy electrons: dynamical calculations. Microscopy (Oxford, England), 2015, 64, 105-110.	1.5	3
12	Ptychographic microscope for three-dimensional imaging. Optics Express, 2014, 22, 12513.	3.4	97
13	Reciprocal-space up-sampling from real-space oversampling in x-ray ptychography. Physical Review A, 2014, 89, .	2.5	77
14	Coherent X-Ray Imaging of Collagen Fibril Distributions within Intact Tendons. Biophysical Journal, 2014, 106, 459-466.	0.5	12
15	Ptychographic inversion via Wigner distribution deconvolution: Noise suppression and probe design. Ultramicroscopy, 2014, 147, 106-113.	1.9	48
16	Information multiplexing in ptychography. Ultramicroscopy, 2014, 138, 13-21.	1.9	169
17	Multiwavelength Ptychography. , 2014, , 689-694.		1
18	Soft X-ray spectromicroscopy using ptychography with randomly phased illumination. Nature Communications, 2013, 4, 1669.	12.8	144

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19	Coherence requirement in digital holography. Applied Optics, 2013, 52, A326.	1.8	15
20	Dual wavelength optical metrology using ptychography. Journal of Optics (United Kingdom), 2013, 15, 035702.	2.2	34
21	Sampling in x-ray ptychography. Physical Review A, 2013, 87, .	2.5	119
22	Translation position determination in ptychographic coherent diffraction imaging. Optics Express, 2013, 21, 13592.	3.4	242
23	Ptychographic transmission microscopy in three dimensions using a multi-slice approach. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 1606.	1.5	286
24	Ptychography: early history and 3D scattering effects. , 2012, , .		2
25	Quantitative phase contrast optimised cancerous cell differentiation via ptychography. Optics Express, 2012, 20, 9911.	3.4	25
26	Noise models for low counting rate coherent diffraction imaging. Optics Express, 2012, 20, 25914.	3.4	89
27	Ptychographic electron microscopy using high-angle dark-field scattering for sub-nanometre resolution imaging. Nature Communications, 2012, 3, 730.	12.8	251
28	Ptychography applied to optical metrology. Proceedings of SPIE, 2012, , .	0.8	0
29	Electron Ptychography: Applications Of The Electron Wave Phase. Microscopy and Microanalysis, 2012, 18, 502-503.	0.4	1
30	Atomic resolution transmission imaging at 30keV via electron ptychography. Microscopy and Microanalysis, 2012, 18, 1024-1025.	0.4	0
31	An annealing algorithm to correct positioning errors in ptychography. Ultramicroscopy, 2012, 120, 64-72.	1.9	234
32	Superresolution imaging via ptychography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 604.	1.5	194
33	Analysis and interpretation of the Seidel aberration coefficients in digital holography. Applied Optics, 2011, 50, H220.	2.1	26
34	Coherent x-ray diffraction imaging of paint pigment particles by scanning a phase plate modulator. New Journal of Physics, 2011, 13, 103022.	2.9	4
35	Evolutionary determination of experimental parameters for ptychographical imaging. Journal of Applied Physics, 2011, 109, .	2.5	43
36	Wavefront Modulation Coherent Diffractive Imaging. , 2011, , .		1

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37	Extended ptychography in the transmission electron microscope: Possibilities and limitations. Ultramicroscopy, 2011, 111, 1117-1123.	1.9	58
38	Ptychography: a powerful phase retrieval technique for biomedical imaging. , 2011, , .		0
39	Ptychography: a novel phase retrieval technique, advantages and its application. , 2011, , .		2
40	Solving for the phase of STEM probes in real space. Journal of Physics: Conference Series, 2010, 241, 012064.	0.4	0
41	Noise limit on practical electron ptychography. Journal of Physics: Conference Series, 2010, 241, 012065.	0.4	1
42	Probe position recovery for ptychographical imaging. Journal of Physics: Conference Series, 2010, 241, 012004.	0.4	17
43	High resolution transmission imaging without lenses. Journal of Physics: Conference Series, 2010, 241, 012003.	0.4	3
44	The role of helium ion microscopy in the characterisation of complex three-dimensional nanostructures. Ultramicroscopy, 2010, 110, 1178-1184.	1.9	6
45	Resolution improvement in coherent diffractive imaging (ptychography). , 2010, , .		1
46	Wave-front phase retrieval in transmission electron microscopy via ptychography. Physical Review B, 2010, 82, .	3.2	86
47	Phase retrieval based on wave-front relay and modulation. Physical Review B, 2010, 82, .	3.2	91
48	A new method of high resolution, quantitative phase scanning microscopy. , 2010, , .		4
49	Optical ptychography: a practical implementation with useful resolution. Optics Letters, 2010, 35, 2585.	3.3	154
50	An improved ptychographical phase retrieval algorithm for diffractive imaging. Ultramicroscopy, 2009, 109, 1256-1262.	1.9	1,118
51	Influence of thick crystal effects on ptychographic image reconstruction with moveable illumination. Ultramicroscopy, 2009, 109, 1263-1275.	1.9	21
52	Ptychography and Related Diffractive Imaging Methods. Advances in Imaging and Electron Physics, 2008, 150, 87-184.	0.2	349
53	A comprehensive Monte Carlo calculation of dopant contrast in secondary-electron imaging. Europhysics Letters, 2008, 82, 30006.	2.0	28
54	A comprehensive Monte Carlo calculation of dopant contrast in secondary-electron imaging. Europhysics Letters, 2008, 82, 49901.	2.0	5

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55	STEM probe characteristics at large defoci for use in ptychographical imaging. Journal of Physics: Conference Series, 2008, 126, 012092.	0.4	0
56	An optical demonstration of ptychographical imaging for focussed-probe illumination. Journal of Physics: Conference Series, 2008, 126, 012093.	0.4	0
57	Dynamical and geometric effects in ptychographic diffractive imaging. Journal of Physics: Conference Series, 2008, 126, 012035.	0.4	1
58	Hard-X-Ray Lensless Imaging of Extended Objects. Physical Review Letters, 2007, 98, 034801.	7.8	726
59	Transmission microscopy without lenses for objects of unlimited size. Ultramicroscopy, 2007, 107, 227-231.	1.9	199
60	Error tolerance of an iterative phase retrieval algorithm for moveable illumination microscopy. Ultramicroscopy, 2005, 103, 153-164.	1.9	88
61	A phase retrieval algorithm for shifting illumination. Applied Physics Letters, 2004, 85, 4795-4797.	3.3	734
62	Movable Aperture Lensless Transmission Microscopy: A Novel Phase Retrieval Algorithm. Physical Review Letters, 2004, 93, 023903.	7.8	652
63	Internal structure of TiAlN/VN coating deposited on sharp edges by ion-assisted physical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1195-1199.	2.1	5
64	Manufacturing of YbAG coatings and crystallisation of the pure and Li <sub>2</sub> O-doped Yb <sub>2</sub> O <sub>3</sub> -Al <sub>2</sub> O <sub>3</sub> system by a modified sol-gel method. Materials Chemistry and Physics, 2003, 77, 802-807.	4.0	40
65	Synthesis of Nanosize Powders and Thin Films of Yb-Doped YAG by Sol-Gel Methods. Chemistry of Materials, 2003, 15, 3474-3480.	6.7	40
66	Plasma-surface interaction at sharp edges and corners during ion-assisted physical vapor deposition. Part II: Enhancement of the edge-related effects at sharp corners. Journal of Applied Physics, 2003, 94, 2837-2844.	2.5	10
67	Plasma-surface interaction at sharp edges and corners during ion-assisted physical vapor deposition. Part I: Edge-related effects and their influence on coating morphology and composition. Journal of Applied Physics, 2003, 94, 2829-2836.	2.5	31
68	Edge Related Effects During Ion Assisted PVD on Sharp Edges and Implications for Coating of Cutting Tools. Surface Engineering, 2003, 19, 310-314.	2.2	5
69	Investigation of intermixing in TiAlN/VN nanoscale multilayer coatings by energy-filtered TEM. Surface and Coatings Technology, 2002, 151-152, 209-213.	4.8	33
70	Electron microscopy studies of hard coatings deposited on sharp edges by combined cathodic arc/unbalanced magnetron PVD. Surface and Coatings Technology, 2002, 151-152, 349-354.	4.8	11
71	A simple model of holography and some enhanced resolution methods in electron microscopy. Ultramicroscopy, 2001, 87, 105-121.	1.9	3
72	Crystal orientation effects on sputtering and depth resolution in GDOES. Surface and Interface Analysis, 2001, 31, 206-211.	1.8	7

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73	Electron Ptychography. I. Experimental Demonstration Beyond the Conventional Resolution Limits. Acta Crystallographica Section A: Foundations and Advances, 1998, 54, 49-60.	0.3	36
74	Electron Ptychography. II. Theory of Three-Dimensional Propagation Effects. Acta Crystallographica Section A: Foundations and Advances, 1998, 54, 61-73.	0.3	22
75	A method for measuring the effective source coherence in a field emission transmission electron microscope. Applied Surface Science, 1997, 111, 174-179.	6.1	8
76	Resolution beyond the 'information limit' in transmission electron microscopy. Nature, 1995, 374, 630-632.	27.8	193
77	Beyond the conventional information limit: the relevant coherence function. Ultramicroscopy, 1994, 54, 61-74.	1.9	75
78	Microscopy in solid state science. Microscopy Research and Technique, 1993, 24, 299-315.	2.2	3
79	Error analysis of crystalline ptychography in the STEM mode. Ultramicroscopy, 1993, 52, 85-99.	1.9	26
80	Deconvolving lens transfer functions in electron holograms. Ultramicroscopy, 1993, 52, 248-252.	1.9	3
81	Experimental tests on double-resolution coherent imaging via STEM. Ultramicroscopy, 1993, 48, 304-314.	1.9	119
82	Simultaneous reconstruction of object and aperture functions from multiple far-field intensity measurements. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 231.	1.5	27
83	Optical demonstration of a new principle of far-field microscopy. Journal Physics D: Applied Physics, 1992, 25, 147-154.	2.8	35
84	The theory of super-resolution electron microscopy via Wigner-distribution deconvolution. Philosophical Transactions of the Royal Society: Physical and Engineering Sciences, 1992, 339, 521-553.	1.0	208
85	Two-dimensional demonstration of Wigner phase-retrieval microscopy in the STEM configuration. Ultramicroscopy, 1992, 45, 371-380.	1.9	56
86	A new look at the resolution limit. Micron and Microscopica Acta, 1992, 23, 213-214.	0.2	0
87	The phase problem, microdiffraction and wavelength-limited resolution – a discussion. Ultramicroscopy, 1989, 27, 413-422.	1.9	27
88	Sub-Ångström transmission microscopy: A fourier transform algorithm for microdiffraction plane intensity information. Ultramicroscopy, 1989, 31, 303-307.	1.9	60
89	Properties of electron microdiffraction patterns from amorphous materials. Ultramicroscopy, 1988, 25, 329-343.	1.9	25
90	MEASUREMENT OF AN ATOMIC POSITION COHERENCE LENGTH IN a-Ge. Journal De Physique Colloque, 1985, 46, C9-63-C9-68.	0.2	1

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91	The recording of microdiffraction patterns in scanning transmission electron microscopy. Journal of Physics E: Scientific Instruments, 1985, 18, 949-953.	0.7	14